

DFG Fellows – Where Are They Now?

Selected findings of a survey of former DFG fellows

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In a large-scale study, a team of researchers led by Jürgen Enders, Twente University (The Netherlands), surveyed over 1,400 former DFG fellows about their experiences during their fellowships and their subsequent career development.

The results are recorded in a study published by the Deutsche Forschungsgemeinschaft (German Research Foundation, DFG)¹. This issue of the DFG infobrief presents some of the key findings.

1 The Study

Those surveyed had been awarded a fellowship in 1986/87, 1991/92 or 1996/97 under one of three DFG fellowship programmes (Postdoctorate Programme, Habilitation Programme or Research Fellowship Programme)². From the total of 4,397 fellowship recipients in these years, 2,500 were randomly selected for the survey. The first step, requiring considerable work, was to find these former fellows' current addresses. This was done mainly by searches on the Internet as well as through telephone directories and enquiries to former employers.

The survey described below was carried out among the 2,476 former fellows for whom addresses could be found. It was conducted between October and December 2002 and included 1,422 respondents. The effective return rate of 62 % lies well above the average for comparable studies and shows the par-

ticular interest of the target group in the issues the study addressed.

The majority of the respondents were from the natural and life sciences (36 percent each), roughly one in four former DFG fellows is from the humanities and social sciences and only a small proportion (three percent) is from the engineering sciences³. Twenty-four percent of those who participated in the survey were female. The average age at the time of being awarded the fellowship was 32.9 years (cohorts: 1986/87, 32.0 years, 1991/92, 33.0 years, 1996/97, 33.2 years); at the time of the survey it was 42.2 years.

2 The DFG Fellowship

2.1 Institutional ties and contact with the private sector

The majority (87 percent) of those surveyed were affiliated with an institution during their fellowship, in most cases (85 percent) a university. The main deviations from this pattern were amongst those working in the humanities and social sciences, more than 40 percent of whom carried out their research work without any institutional ties (see Table 1).

The fact that most DFG fellows carried out their research at universities does not, however, mean that business contacts played a subordinate role: four out of ten engineers, one in four natural scientists and one in five life scientists reported cooperation with the private sector. Only in the humanities and social sciences did collaboration with business and industry remain relatively rare (7 percent).

1. Jürgen Enders und Alexis-Michel Mugabushaka (2004): *Wissenschaft und Karriere – Erfahrungen und Werdegänge ehemaliger Stipendiaten der Deutschen Forschungsgemeinschaft, Bonn* (http://www.dfg.de/en/dfg_profile/facts_and_figures/statistical_reporting/stip2004/index.html)

2. In 2000, the three programmes were brought together in a single „Research Fellowship“ programme designed to promote young researchers.

3. Given their small numbers, caution must be exercised in generalising the findings from the responses from engineering scientists.

Table 1: Institutional ties during the fellowship by discipline (in percent)

	Humanities/ Social Sc.	Biology/ Medicine	Natural Sciences	Engineering Sciences	Total	<i>Question 2.10: Did you carry out the work for which you were awarded the fellowship wholly or partly in the context of an activity in a university or research institution?</i>
The research was carried out...						
at a university/research institution	58.5	97.0	97.4	84.8	87.4	
mainly privately	41.5	3.0	2.6	15.2	12.6	
Total	100.0	100.0	100.0	100.0	100.0	
Number (n)	(284)	(429)	(425)	(33)	(1,171)	
Institutional context						
university chair	92.0	80.4	84.5	96.4	84.4	
public research institution	8.0	18.6	14.3	3.6	14.7	
private sector R&D department	0.0	1.0	1.2	0.0	0.9	
Total	100.0	100.0	100.0	100.0	100.0	
Number (n)	(162)	(414)	(413)	(28)	(1,017)	

There were many forms of contact. The most frequently mentioned collaboration was the development of practical applications in the interests of a company (cf. Enders/Mugabushaka 2004: page 19).

2.2 International mobility

Almost three quarters of those surveyed spent a long research period abroad during their fellowships. The main destination of DFG fellowship recipients was the USA – two out of three of those surveyed decided to pursue research there during their fellowships. Once again, it is in the humanities and social sciences that we find deviations from this pattern. Here, only one in three travelled to the USA and no other country acted as a particular "magnet" for researchers in those fields (see Table 2).

Asked for their reasons for deciding to conduct research abroad during their fellowship period, the majority of those surveyed mentioned the reputation of the institution they had chosen (81 percent). The opportunity to establish contact with other researchers was also frequently mentioned (83 percent).

Table 2: First research destination during the DFG fellowship by discipline (in percent)

	Humanities/ Social Sc.	Biology/ Medicine	Natural Sciences	Engineering Sciences	Total
USA	33.6	71.8	71.3	72.0	66.3
United Kingdom	10.3	6.9	5.5	0.0	6.6
Canada	3.4	3.7	6.6	4.0	4.9
France	8.6	4.0	4.3	0.0	4.7
Switzerland	3.4	3.2	2.3	4.0	2.9
Italy	7.8	0.0	1.1	0.0	1.6
Australia	0.0	1.7	1.4	4.0	1.4
Netherlands	2.6	2.0	0.6	0.0	1.4
Sweden	0.0	1.1	1.1	8.0	1.2
Denmark	2.6	0.9	0.6	0.0	1.0
Other countries	28.0	4.8	5.3	8.0	7.5
Total	100.0	100.0	100.0	100.0	100.0
Number (n)	(116)	(348)	(348)	(25)	(837)

*Question 2.16:
During your DFG fellowship, did you spend a long period doing research work abroad (not including short stays abroad for congress visits, participation in conferences, etc.)?*

*Basis:
survey participants who worked abroad during their fellowships.*

Table 3: Motives for working abroad during the fellow-ships by discipline (in percent)

	Humanities/ Social Sc.	Biology/ Medicine	Natural Sciences	Engineering Sciences	Total
Materials/equipment not available in Germany	62.5	44.6	28.9	28.0	40.0
The reputation of the foreign institution in my research area	60.2	84.0	84.7	80.8	81.1
The possibility of gathering information about subsequent work abroad	28.0	31.3	33.4	28.0	31.7
The opportunity to establish contacts with foreign scientists	80.4	82.5	83.6	76.9	82.5
The opportunity to improve my chances on the German job market through working abroad	51.4	81.0	73.4	69.2	73.6
The fact that in my subject area, one simply has to have worked abroad	48.7	68.3	73.2	56.0	67.3
To exchange ideas with research collaborators living abroad	62.8	58.2	58.2	65.4	59.1
Number (n)	(124)	(352)	(351)	(26)	(853)

Question 2.17:
Please indicate how important these were in making your decision for one or more periods abroad during the DFG fellowship. (scale: 1 = 'very important' to 5 = 'not at all important').
Basis:
survey participants who worked abroad during their fellow-ships.

Finally, the expectation that a research stay abroad would improve their chances on the German job market played an important role (74 percent). In the area of cultural studies, another important factor was the fact that the required research material was not available in Germany – this chiefly applies to projects in which cultural aspects of the country concerned are the subject of the research (e.g. for historical or archaeological studies) (see Table 3). This explains the finding that researchers from those fields tend to distribute their visits over a large number of countries. The countries visited are not so much "leading research nations" as the very subjects of the research themselves.

Judging in retrospect the usefulness of the period abroad, respondents widely agree on two aspects: 98 percent of survey participants agree with the statement that working abroad was an enriching personal experience and 95 percent of all former fellows see their period abroad as very helpful in their research work.

2.3 Evaluation of the DFG Fellowship

In all fellowship programmes, the majority of survey participants regard the benefit to their subsequent professional careers and the opportunity to add to their own research qualifications as the main benefits of the fellowship. The possibility of establishing contacts with other researchers abroad is also highly valued – albeit with significant differences between former fellows from the Habilitation Programme (46 percent) on the one hand, and former fellows from the Research Fellowship and Postdoctorate Programmes (78 and 75 percent) on the other (see Table 4).

The majority of the respondents have a positive view of the support provided by the DFG Head Office before and during the fellowship. The general satisfaction is shown, for instance, by the fact that 92 percent of survey participants declared that they would opt for a DFG fellowship again – with only small differences between the various programmes. There is, however, sporadic criticism: four out of ten find that the processing of proposals is too time consumptive and a significant proportion of survey participants

Table 4: Assessment of the benefit to the research work and subsequent career by fellowship programme (in percent, answer categories 1 and 2)

	Habilitation Programme	Research Fellowship Programme	Postdoctorate Programme	Total
The fellowship was beneficial...				
to my subsequent professional career	82.6	86.0	84.0	84.4
in enabling me to establish contacts with other researchers at home and abroad	46.4	77.8	74.8	67.9
in adding to my research qualifications	88.4	93.6	89.2	90.8
for the publication of my research work	54.6	64.8	56.1	59.2
for the development of practical application contexts	9.0	24.3	24.1	19.9
to the establishment of contacts with industry / the private sector	3.7	8.6	10.7	7.9
Number (n)	(351)	(494)	(363)	(1,208)

*Question 2.22:
To what extent was the DFG fellowship beneficial to your research work and subsequent career? (scale: 1= 'highly beneficial' to 5 = 'not at all beneficial')*

regard the advice given during the application phase as in need of improvement (cf. Enders/Mugabushaka 2004: page 21).

3 Professional and Research Career

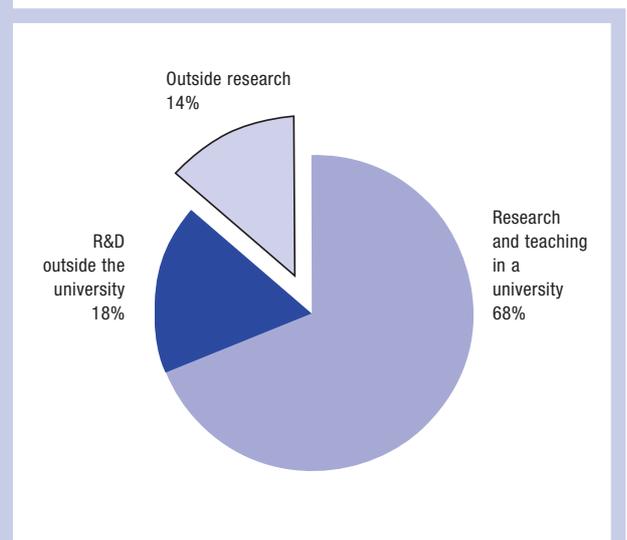
3.1 Professional situation

Ninety five percent of survey participants are now in employment, two percent are fellowship recipients and two percent state their occupation as "housewife/husband" or "other". Only one percent of survey participants give their position as "currently unemployed". The majority of former DFG fellows have decided to remain in research (see Figure 1). For many respondents the career path has not yet reached its peak: at the time of the survey, only one third reported occupying a professorship.

3.2 Country of current employment

A central result of the study relates to the country in which former DFG fellows are presently living. In a preliminary study⁴, it was determined on the basis of

Figure 1: Current employment sector (percent of answer categories 1 and 2)



*Question 3.1:
Please describe below your main career steps since the end of your DFG fellowship*

4. Jürgen Güdler (2000): *They never come back? Zur späteren DFG- Antragsaktivität ehemaliger Forschungsstipendiaten*, DFG-Infobrief, 1,1 (http://www.dfg.de/zahlen_und_fakten/ib/ib0401.html).

document analysis that 40 percent of former research fellows contact the DFG again with subsequent grant applications—and can thus be considered to have remained active in research and to have returned to Germany. If we now consider, as in the survey presented here, all DFG fellowship programmes and all those who have remained active in research, the proportion of "returners" is much higher: as many as 85 percent of the survey respondents are now working in Germany. The "brain drain" of young German researchers thus seems numerically smaller than it is often perceived to be in public discussion. As shown in Figure 2, the return rate is largely independent of the time at which a survey participant was a DFG fellow: members of the youngest group (1996/97) tend to spend more time abroad than the other two groups (1986/87 and 1991/92). However, after four years, the proportions remaining abroad become more or less equal.

Of those currently working abroad, four out of ten work in the USA, two in Switzerland and one in the United Kingdom.

3.3 Professional and job satisfaction

Asked about their present situation, former DFG fellows express a high level of job satisfaction: 79 percent of survey participants are satisfied with their present employment situation, 77 percent say that their current job corresponds to their education and 59 percent regard their professional expectations as fulfilled. If we differentiate between those currently working in research and those involved in other professional activities, we find clear distinctions in favour of former DFG fellows who have remained in research (see Fig. 3).

4 Closing Summary

As a whole, the study, which has been presented here with just a few of its results, gives a broad set of complex and informative data on the career paths of young scientists and academics—exemplified here by former DFG fellows. The findings represent an important input to the discussions

Figure 2: Survey participants working abroad up to 48 months after completion of the fellowship (in percent)

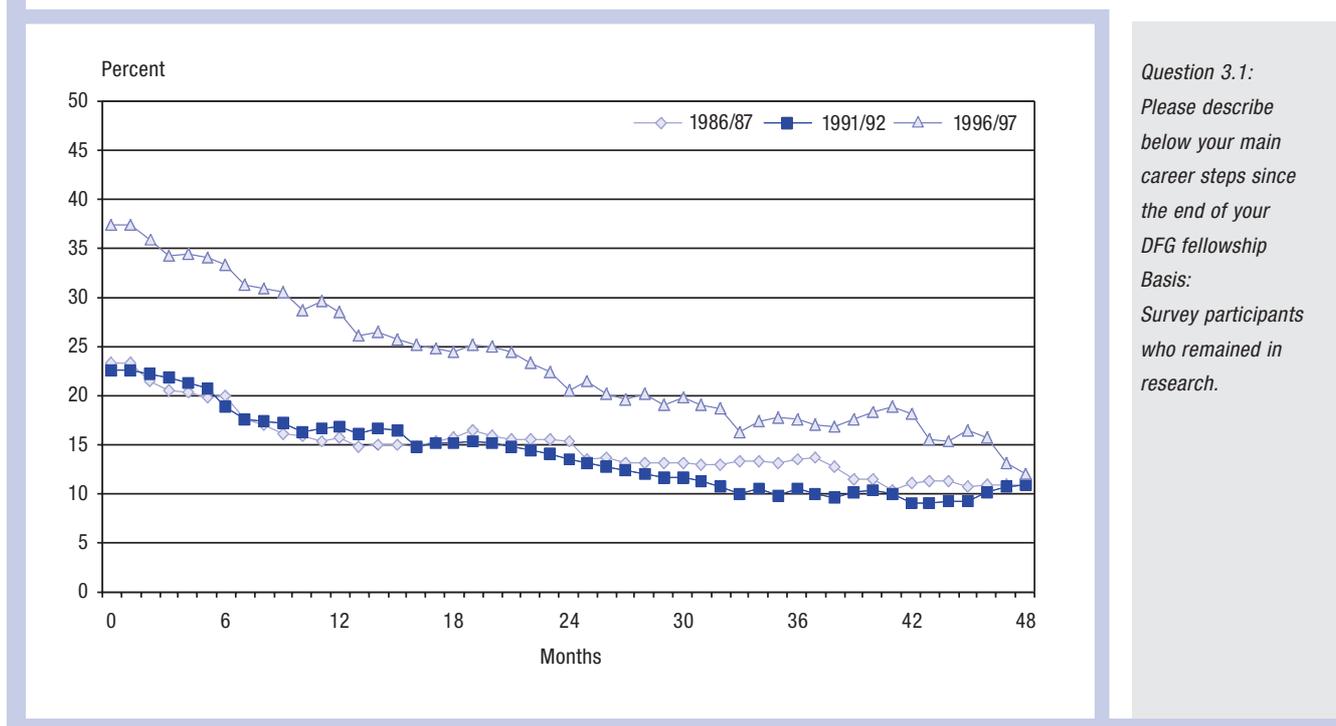
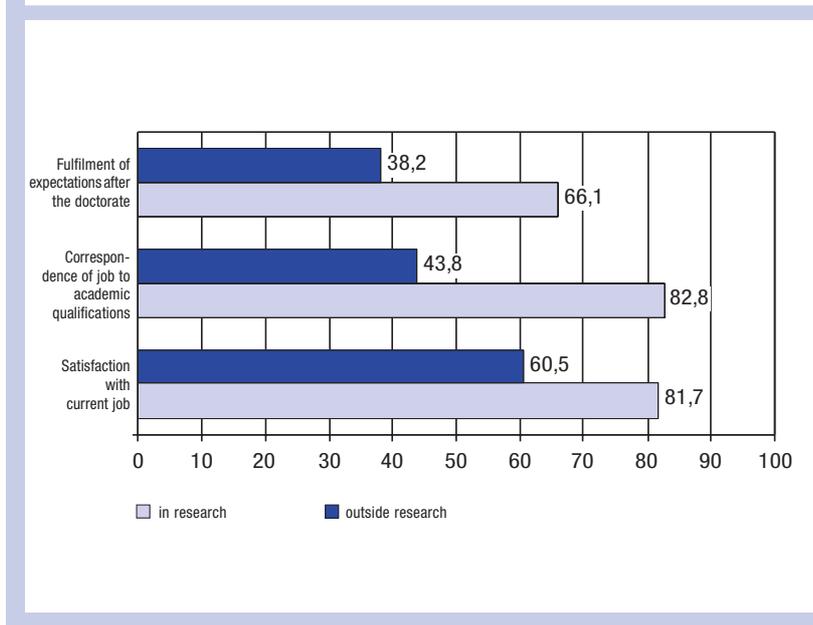


Figure 3: Professional and job satisfaction (percent of answer categories 1 und 2)



Question 3.6:
 To what extent are you satisfied with your current job?
 (scale: 1 = 'very satisfied' to 5 = 'not at all satisfied').

Question 3.7:
 Taking into account all aspects of your professional situation (e. g. position, income, career development outlook, work duties and content), to what extent does your current job correspond to your academic qualification?
 (scale: 1 = 'very satisfied' to 5 = 'not at all satisfied').

Question 3.8:
 Thinking back to the time after gaining your doctorate, to what extent have your expectations of your professional career been fulfilled?
 (scale: 1 = 'corresponds entirely to my education' to 5 = 'does not correspond at all to my education').

regarding possible further development of the DFG programme portfolio and have already stimulated activities resulting in concrete measures for improved support of fellowship applicants by the DFG's Head Office⁵. A rich source of information provided by the study, to which little space could be given here, consists of the comments and suggestions made by survey participants regarding the promotion of young researchers by the DFG and the survey itself. Topics of particular note are the critical phases in the "funding chain" that arise when changing between different funding schemes and the uncertainties linked with it. Age limits are also a controversial topic of discussion. One of the suggestions to the DFG Head Office worth emphasising, for instance, is the proposal that more should be done to assist contact with other funding recipients. Some also suggest – in direct relation to the survey presented here – that such surveys should become an integral part of post-fellowship contact networks.

This final suggestion, in particular, seems an important argument for the efforts made by the DFG to undertake the pilot survey presented here and to make it a part of its standard monitoring system.

IMPRESSUM

The DFG infobrief is published by the Information Management section of the Deutsche Forschungsgemeinschaft (DFG), Bonn.
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5. Cf. Beate Scholz (2004): *Wegbereiter einer wissenschaftlichen Karriere: DFG Stipendienförderung für Postdocs.* (www.dfg.de/zahlen_und_fakten/stip2004.html)